

**REMARKS**

The Applicants re-assert the arguments made in the amendment filed 07/20/2006 and direct the Examiner's attention to **MPEP 2112(IV)** entitled "EXAMINER MUST PROVIDE RATIONALE OR EVIDENCE TENDING TO SHOW INHERENCY." *See Appendix A.* The remainder of this response will further explain how the Examiner has failed to sustain a case of inherent anticipation, and why the Examiner's remarks in the Final Office Action of August 17, 2006 fail to adequately address the arguments made in the amendment filed 07/20/2006.

Not one of the references used by the Examiner necessarily and unambiguously discloses an electrode material having the chemical composition set forth in Applicants' claims in the form of an amorphous mixture, as the claims further require. The Examiner incorrectly bases his conclusion of inherency on the scientifically incorrect assertion that "*products of identical chemical composition can not have mutually exclusive properties, and thus, the claimed characteristics (i.e. remaining an amorphous mixture), is necessarily present in the prior art material.*" In the previous response, Applicants provided the simple, well-known, and undisputed example of graphite and diamond to illustrate how products of identical chemical composition can in fact have mutually exclusive structures and properties, thereby rebutting the Examiner's assertion and with it, the basis for the inherency rejections.

The Examiner's response is not to challenge the validity of the example, but merely to state that "we are not dealing with graphite or diamond." This is true. It is also irrelevant. It shows that the Examiner completely misses the point of the example, which is to rebut the Examiner's assertion that products of identical chemical composition necessarily have the same properties.

The Examiner then states that the

issue under contention is whether the all-encompassing limitations '*one electrochemically inactive elemental metal*' (which one? Indefinite) and '*at least one electrochemically active elemental metal*' (which one? Indefinite) can be taken as any given representative composition that behaves as set forth by the applicant. The answer is NO, because applicant's classic example (i.e. graphite vs. diamond) calls for specific materials, compositions and crystalline microstructures, which are certainly quite different from applicant's claimed amorphous material. (emphasis in original).

The above-quoted passage from the Examiner is improper and inaccurate for a number of reasons. First of all, the Examiner is confusing the issue of definiteness under 35 U.S.C. 112 with the issue of inherency under 35 U.S.C. 102. The issue of definiteness has absolutely nothing to do with whether the material in the prior art references is amorphous or not. Secondly, the Examiner's assertion that the example of graphite vs. diamond is different because it calls for specific materials, compositions, and crystalline microstructures is plainly incorrect because the claim does recite specific compositions and calls for the composition to be amorphous. With respect to the composition, the claim calls for an electrochemically active elemental metal and an electrochemically inactive elemental metal. Both terms are defined in the specification. With respect to structure, defining the composition to be amorphous is a description of its microstructure, namely its lack of a crystalline structure. The specification clearly defines the term "amorphous mixture" on page 2 as being "a mixture that lacks the long range atomic order characteristic of crystalline material," which again is mutually exclusive with a crystalline structure.

In response to the Applicants' point, raised in the previously submitted response, that some of the references do not provide sufficient details regarding the manufacture of particular alloys, the Examiner argues that how the prior art products are made is irrelevant to the issue of inherency because "[p]atentability of a product does not depend on method of making the same." The Examiner's statement, however, reflects a misunderstanding on his part regarding the relationship between a composition's microstructure and how it was made. The reason the Applicants discussed the lack of disclosure regarding how the prior art alloys were made is because it is well-known in the field of materials science that the manufacturing method affects whether the resulting composition is amorphous or crystalline. Because the cited references do not disclose sufficient details regarding how the alloys disclosed therein were prepared, it is impossible to determine whether or not the alloys were inherently amorphous. Under these circumstances, the doctrine of anticipation by inherency does not apply.

In response to the Applicants' comments regarding the JP '112, JP '221, and WO'532 prior art references, the Examiner argues that the claim language only requires that at least one of the electrochemically active elemental metals is required to be in a non-crystalline form. This

makes no sense. The Examiner is mis-reading the claim. The language of claim 1 clearly requires the mixture to be amorphous.

Applicants have rebutted the basis for the rejections based upon inherency that the Examiner raised through reliance on scientific evidence. Specifically, the graphite/diamond example that Applicants presented thoroughly refutes the Examiner's position that materials having the same chemical composition necessarily have the same microstructure and properties. In addition, there is no dispute that the cited reference provide few, if any details, regarding the manufacture of the alloys described therein. Because it is textbook materials science that the manufacturing method influences the microstructure and properties of the alloy, there is no basis for asserting that the prior art alloys inherently were identical to the claimed alloys in the absence of sufficient information regarding how they were manufactured. It is now incumbent upon the Examiner, pursuant to MPEP 2112(IV), to come up with a scientifically based rationale explaining why, in spite of the evidence that Applicants have produced, the prior art alloys nevertheless are inherently identical to the claimed alloys. Thus far, the Examiner has failed to meet that burden. Accordingly, the rejections must be withdrawn.

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Respectfully submitted,

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